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Richard L. DeCristoforo

Portland State University

Justus H. Freimund

Portland State University

Lewis G. Hahn

Portland State University

Arne O. Henifin

Portland State University

June Hohensee Kalogeratos

Portland State University

See next page for additional authors

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Author

Richard L. DeCristoforo, Justus H. Freimund, Lewis G. Hahn, Arne O. Henifin, June Hohensee Kalogeratos, Hyung Bok Kim, Richard S. Peterson, Louise Smith, and Lewis L. Winchester

*Portland State College, School of
Social Work*

DEVELOPMENT OF A TOOL TO MEASURE APPLICABILITY OF THE
GENERAL SYSTEMS THEORY TO GENERIC SOCIAL WORK

by

Richard L. DeCristoforo
Justus H. G. Freimund
Lewis G. Hahn
Herbert J. Hansen
Arne O. Henifin
June Hohensee Kalogeratos
Hyung Bok Kim
Richard S. Peterson
Louise Smith
Lewis L. Winchester Sr.

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ABSTRACT

The goal of this project was to test the applicability of the General Systems Theory to the traditionally held concept of generic social work. If an applicability existed, a direct survey of the field would be feasible. This could lead to the development of a general or a core conceptualization of social work practice.

General Systems Theory was extended to include the properties of the open organismic human group system. There were twenty-one categories at this level of abstraction. Internal consistency of the General Systems Theory model was tested and related to social work treatment concepts. To do this, 427 concepts which describe social work actions were isolated from traditional social work literature and its three methods of practice. The reliability of classifying these action concepts into the twenty-one General Systems Theory categories was tested.

All of the action concepts could be classified into the General Systems Theory categories. None of the action concepts was classified into the twenty-second, residual category. Non-parametric statistical tests were used to measure reliability. Reliability was found to be low. The low reliability was inversely related to training and was not related to other factors tested. Grouping the action concepts in a number of different ways did not significantly change the low reliability. The social work action concepts were found to be vague, not discrete, and of uncertain levels of abstraction. Specific, concrete definition of any given action concept was found to be difficult.

Within the limits of this study, it was suggested that actual social work practice would have to be reconceptualized in more accurate terms before General Systems Theory and social work practice could be reconciled.

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DEVELOPMENT OF A TOOL TO MEASURE APPLICABILITY OF THE GENERAL SYSTEMS THEORY TO GENERIC SOCIAL WORK

CHAPTER I

INTRODUCTION AND BACKGROUND

This report may be seen as related to a series of studies begun in 1957 at the University of California at Berkeley dealing with the development of social work theory from the viewpoint of General Systems Theory. *

GST is a body of thought and a frame of reference for discovering attributes and relationships common to all phenomena as systems. Its definition will be expanded as the report progresses.

The general purpose of this current project has been to go as far as possible toward preparing theoretical and empirical groundwork to form the basis of a subsequent project which would construct a schedule for surveying professional practice.

To accomplish the general purpose it was necessary to review GS literature and the Berkeley studies, to develop

*Hereafter, GS will refer to General Systems and GST to General Systems Theory, in keeping with the general usage in the literature.

a logico-deductive model with internal consistency and to attempt to relate this model to those current in the traditional body of social work literature.

The report will follow this order in general, first discussing the philosophical base of GST, indicating its relationship to certain scientific disciplines and then suggesting its implications for social work. Construction of the model will then be reported, together with its characteristics. Tests of the model against traditional concepts will then be described and evaluated and recommendations for constructing a schedule made on the basis of findings.

As we shall see, the theory that phenomena tend to be organized into systems, that is, dynamically, functionally and structurally defined modes of interaction has achieved consideration in the application of scientific thought to understanding, predicting and controlling animate and inanimate subject matter. To apply GST to social work requires examination of assumptions underlying such a theory and making these explicit. James Miller's description of GST seems pertinent in relating GST to social work and other scientific disciplines.

"General Systems Theory is a series of related definitions, assumptions and postulates about all levels of systems from atomic particles through atoms, molecules, crystals, viruses, cells, organs, individuals, small groups,

societies, planets, solar systems and galaxies.

"General behavior systems is a sub-category of such theory, dealing with living systems, extending roughly from viruses through societies. Perhaps the most significant fact about living things is that they are open systems, with important inputs and outputs. Laws which apply to them differ from those applying to relatively closed systems."(1)

It is acknowledged that by endorsing a particular theory or building and applying theory, one arbitrarily is forced into adopting a stand in relation to a number of fundamental philosophical questions. It is necessary to clarify the philosophical position taken and to recognize the existence of alternative positions. The philosophical position taken here is that ultimately all theories will reflect one basic form or order which prevails in the universe. This position seems best able to express the aims of GST in social work.

One consequence of taking such a position is that communication and transfer of such knowledge among all disciplines whose subject matter is physical or non-physical is enhanced. W. Ross Ashby emphasizes that an analytic approach to science has been utilized at the expense of a synthetic approach with the attendant disadvantages of loss of communication and a tendency towards fragmented knowledge.(2) The point of view that all theories will ultimately reflect a basic form or order

prevailing in the universe, the synthetic approach, is explicit in GST.

Ludwig von Bertalanffy's identification and formulation of this synthetic approach has gained increasing numbers of advocates in a variety of scientific disciplines. Articles and authors in General Systems Yearbook from 1956 illustrate this expanding trend.

"Statistics of Images of Galaxies with Particular Reference to Clustering," an article by Jersey Neyman, Elizabeth L. Scott and C. D. Shane, applies the synthetic approach of GST to problems in astronomy.(3) Karl Menninger, in the 1957 General Systems Yearbook, utilizes an important concept of GST, homeostasis, in understanding the dynamics of stress in the human organism.(4) R. A. Gerard, in an article which attempts a fairly direct application of analogy, relates cells living together in an organism to individuals living in society, applying the assumption that these two systems responded to certain underlying similarities in organization and interaction.(5) Another example is Kenneth Boulding's application of GST to human society. Boulding poses the analytic synthetic dichotomy in terms of perspectivism as opposed to reductionism, making particular reference to the applicability of GS to the field of education.(6) Each year new contributions are made by scientists from diverse fields who are applying what may be called a generalist, or perspectivist,

or synthesist approach to their various disciplines. The behavioral sciences, psychology in particular, and in recent years social work, have become increasingly aware of the value of the GST approach in their disciplines.

David Krech, in an article, "Dynamic Systems, Psychological Fields and Hypothetical Constructs,"(7) employs a GS approach, as does Anatol Rapoport in numerous contributions. Gordon Hearn has responded to the GS approach and has endeavored to develop a rationale and system for human organismic systems and particularly for social work.

"Within recent years an interesting new connection has developed among a particular group of scientists. Representing fields as diverse as biology, physics, political science, and psychology, to mention but a few, these scientists have become identified, now, as general system theorists. Apparently the principal factor which has drawn them together is a series of convictions which they share in common about theory and theory building."(8)

GST has been generally defined by Kenneth Boulding as a quest for "a body of systematic theoretical constructs which will discuss the general relationships of the empirical world."(9) A. D. Hall and R. E. Fagea, in an article in the General Systems Yearbook, also point out that a system "is a set of objects together with relationships between the objects and between their attributes."(10)

In the process of applying CST to social work, Gordon Hearn, in his monograph, Theory Building in Social Work, has recommended the open organismic system as an appropriate model. Hearn points out that models are symbolic representations of perceptual phenomena and vary in two ways:

"They vary, first, in their level of abstraction. At the lower end of the abstraction continuum are the iconic or pictorial models; in the middle ranges are the descriptive models; and at the upper end are the more abstract mathematical models. James M. Beshers explains that mathematical models 'are constructed by abstracting the properties of some data by measurement, and by expressing these properties in a set of symbolic statements that include the logical relationships that hold for the entire set of statements. Any mathematical statement may be regarded as a model by identifying the symbols of the mathematical statement with some data.'

"Models may vary, secondly, in terms of the metaphor they employ. Meadows has indicated that historically the two dominant metaphors have been the organism and the machine. These have exchanged dominant positions, depending upon the particular cultural milieu. The Greeks, for example, preferred the organismic model of 'system,' whereas the Renaissance thinkers embraced the machine model. At the present there appear to be three types--the organism, the machine, and the field--with the organism in the dominant position." (11)

This position reflects Hearn's theoretical frame of reference about human beings. By focusing on certain characteristics of human beings he argues that these

characteristics are best dealt with by an organismic rather than mathematical or field-type models.

"Certain characteristics of human beings must be kept in mind as one chooses a metaphor for the model of human systems. Among the more important are the following facts about human beings, as individuals or collectively: (1) Humans exchange material with their environment, material in the form of both energy and information. (2) This energy may arise either from within the system or from the environment of the system. (3) Human behaviour is purposive. (4) When considered both as individuals and as a species, humans have a characteristic state toward which they move. (5) Humans may achieve their same characteristic state from different initial conditions and from varying inputs of energy and information. (6) In the human individual as well as in human aggregations such as groups and communities there is a dynamic interplay among their essential functional processes enabling them to maintain a steady state. (7) There is a tendency in human systems toward progressive mechanization, that is, in the course of human development, certain human processes tend to operate more and more as fixed arrangements. (8) Human systems show a resistance to any disruption of their steady state. (9) They are capable, within limits, of adjusting to internal and external changes. (10) They can regenerate damaged parts. (11) They can reproduce their own kind.

"It will be the contention of this formulation that human individuals and human aggregations as characterized above can most appropriately be represented, in general, as open systems but more particularly as organismic systems, the latter being regarded here as one type of open system." (12)

Selection of a model in GS demands certain principles. First, models have correspondence with reality and ideally the model should be expressed in a testable hypothesis. Second, the advantage to be gained by employing such a model depends upon the assumption that objects, relationships between objects, and between their attributes be grouped into systems. Third, systems are governed by laws which may be described as tendencies. Fourth, the laws of one system have a varying degree of applicability to all other systems. Fifth, correlations within systems have a greater correlation than among systems.

Furthermore, in systems which have a high degree of affinity, comparisons may be made by applying knowledge of one system in analogue form to another system where less is known about the objects, interactions or attributes of the second system.

In view of Hearn's application of GST to social work and, specifically, to the human open organismic model, it may be well to consider the impact of this approach on the present practice of social work. Social work had its beginning in man's attempt to systematically aid his fellow to adjust to his environment. Theory and practice were developed on an empirical basis. With experience, there evolved a tendency to partialize practice into specialized areas of competence, in terms of both theory and practice. This tended to emphasize differences within the discipline.

The application of GST to social work would require an approach in which the similarities of the areas of competence, rather than the differences, would be considered.

Among the three methods of social work, there is assumed to exist a common core of precepts, principles and practice; but there are also differences in emphasis and content which distinguish them one from another. To illustrate, social casework is preoccupied with the individual; group work, a concern with the group of individuals as a unit; and community organization's goal is to mobilize community resources to meet human need. The body of theory, practice and concepts related to the categories of casework, group work and community organization will commonly be designated hereafter as traditional social work. Those practitioners imbued with this theory, involved in this practice and utilizing these concepts will be referred to hereafter as experienced social workers.

This project accepts the essential unity of science, including the behavioral sciences, on the basis that the subject matter of all sciences may be described in terms of GST. Hearn applies the same argument for unification of rationale and practice to the various areas of competence in social work. The assumptions of GST imply that casework, group work and community organization have a high degree of correspondence in terms of the way they function as sub-systems, and this results in a similarity of basic knowledge, attitudes and skill.

The next phase is to develop a model to test GST against a representation of social work practice in order to demonstrate the reliability with which a GS approach may be applied. The model is based on a combination of inductive and deductive approaches. It is the further intention of this project to test this model against some representation of social work practice in casework, group work and community organization. It is then intended to refine the model after a first exploratory approximation and abstract from it a schedule. Kenneth Boulding seems to summarize our approach in the following quotation:

"Two possible approaches to the organization of General Systems Theory suggest themselves, which are to be thought of as complementary rather than competitive, or at least as two roads, each of which is worth exploring. The first approach is to look over the empirical universe and to pick out certain general phenomena which are to be found in many different disciplines and to seek to build up general theoretical models relevant to these phenomena. The second approach is to arrange the empirical fields in a hierarchy of complexity of organization of their basic individual or unit of behavior, and to try to develop a level of abstraction appropriate to each." (13)

This project has focused on two tasks in constructing and applying the open organismic model to social work practice. First, an attempt has been made to arrange the characteristics of organismic systems from their highest level of abstraction deductively downward to the level of

abstraction represented in Hearn's unpublished manuscript, Theory of Group Development.

Second, concepts from social work literature, including representative items from casework, group work and community organization were collected. An inductive approach was then used to determine empirically the relationship between these data and GS categories. One research hypothesis was that the traditional discrimination in social work between casework, group work and community organization is unparsimonious when viewed from a GS framework. A corollary was that a core of common knowledge, attitudes and skills exist throughout the discipline of social work. Implicit in this approach was the assumption that the professional activities undertaken in these various areas of competence in social work are all conducted within a system defined as a human group, an open organismic system. If this hypothesis is valid, then the effect of such an approach upon the education of the professional social worker, the curriculum of the social work graduate school and research within the discipline is significant.

The formal hypotheses developed into the following statements:

1. Concepts derived from GST could be correlated with concepts derived from traditional social work in a relatively simple and meaningful manner.

2. Actual social work practice is generic.
That is, actual practice in casework, group work and community organization is essentially similar.
3. Traditional social work literature would contain concepts which were identifiable and discrete.
4. Traditional social work literature actually describes what the social worker does in practice.
5. There would be no significant difference between the concepts derived from the literature of the various areas of traditional social work practice.
6. Concepts drawn from traditional social work practice theory could be applied to a theoretical framework based on GST in such a manner that a questionnaire could be developed.

If GST could be reliably applied to social work concepts, then a questionnaire could be developed which would test empirically the direct applicability of GST to social work practice.

To summarize, GST, its background and influence upon science in general, has been considered. GS has been discussed more specifically in terms of research models as they apply to human interactions. The influence of GST

upon the practice of social work has been examined and a logical model for determining its applicability suggested. The possible consequence of such an endeavor has been considered in light of its influence on social work in terms of its present division into casework, group work and community organization. Chapter Two will review the literature examined in this project.

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CHAPTER XI

THE LITERATURE

The actual beginnings of GST are difficult to trace. The literature of the ancient philosophers gives evidence of attempts to find general relationships in all knowledge as it was known in their time. Euclid worked with geometry; Aristotle in a number of fields. Thomas Aquinas worked to reconcile all scientific knowledge with religious dogma. Francis Bacon made his contribution by advocating an approach which led to the scientific method. The early writings of Bertrand Russell and the work of Einstein were efforts to correlate and integrate knowledge. GST is one of a number of modern attempts to unify and systematize the rapidly expanding knowledge of science. Ludwig von Bertalanffy describes his first formulation of GST:

"When, some 40 years ago, I started my life as a scientist, biology was involved in the mechanism-vitalism controversy. The mechanistic procedure essentially was to resolve the living organism into parts and partial processes: the organism was an aggregate of cells, the cell one of colloids and organic molecules, behavior a sum of unconditional and conditioned reflexes, and so forth. The problems of the organization of these parts in the service of maintenance of the organism, of regulation after disturbances and the like were either by-passed or, according to the theory known as vitalism,

explainable only by the action of soul-like factors, little hobgoblins as it were, hovering in the cell or organism--which obviously was nothing less than a declaration of the bankruptcy of science. In this situation, I was led to advocate the so-called organismic viewpoint. In one brief sentence, it means that organisms are organized things and, as biologists, we have to find out about it. I tried to implement this organismic program in various studies on metabolism, growth, and biophysics of the organism. One way in this respect was the so-called theory of open systems and steady states which essentially is an expansion of conventional physical chemistry, kinetics and thermodynamics. It appeared, however, that I could not stop on the way once taken and so I was led to a still further generalization which I called 'General Systems Theory.' The idea goes back for some considerable time-- I presented it first in 1937 in Charles Morris' philosophy seminar at the University of Chicago. However, at this time theory was in bad reputation in biology, and I was afraid of what Gauss, the mathematician, called the 'clamor or (sic) the Bessotians.' So I left my drafts in the drawer, and it was only after the war that my first publications in this respect appeared." (1)

The explosion of knowledge immediately after World War II and since gave new impetus to finding some systematic relationship among scientific specialities. New sciences such as ecumenometrics, telemetrics and cybernetics, encompassed more than one field of knowledge. Bertalanffy, Rapoport, Miller, Boulding, Alchoff, Hall and Fagan, among others, had been giving much thought to the development of

a new approach to the integration of all knowledge and formed the Society for General Systems Research in 1955.

Their first journal, General Systems Yearbook, was published at Ann Arbor, Michigan, in 1956. In that same year, Behavioral Sciences began publication under the auspices of the Mental Health Department of the University of Michigan. This journal was devoted to application of GST to the behavioral sciences primarily through the use of mechanistic models. Many of the same people appear on both editorial boards.

A comparison of the contributors to the early issues of these journals with those of more recent date indicates the growth in interest and scope of the theory.

The first issue of the General Systems Yearbook was made up of papers written by the members of the group cited above. The subject matter dealt primarily with the application of theoretical models to mathematics, physics, biology and economics. Some contributors came from psychology and sociology.

The current journals list among their contributors not only those members of the original group, but others from a wide variety of universities, research centers, governmental agencies and private industry. Articles are presented by authors from Spain, Germany and England. The subject matter in 1964 included, in addition, the fields

of learning, organization, history and political science. Increased emphasis is given to human behavior.

This expanding scope seems significant, not only because of the growth of such fields, but because scholars in these fields are finding GST a convenient vehicle through which a scientific base might be formed on which to build bodies of knowledge that were hitherto considered to be inherently unscientific.

The General Systems Yearbook draws from the fields of cybernetics, information theory, game theory, organization theory, topology, teleology and communication theory. The journal is devoted to attempts to apply GST to many different fields of knowledge and is an indicator of the growth and development of the theory itself.

The monograph, Theory Building in Social Work, is the result of a period of exploration by Gordon Hearn on the subject of GST as it relates to social work practice. The monograph grew from the conviction that there is in reality a social worker role that is similar whether the social worker is working with individuals, groups or communities.

"It has been the contention of this monograph that individuals, groups and communities can all be represented as organismic systems, since each appears to manifest, in one form or another, all the properties of such systems. Further, it has been claimed that general

systems theory can be used as a basis upon which to build a generic theory of social work practice."(2)

Hearn's premise is that social work is neither purely an art nor purely an applied science, but rather a science-based art, and this status has influenced research in the field accordingly. The practice theory existing today in social work has been constructed by practitioners who are not oriented to the methodology of scientific inquiry. Systematic research programs could and should contribute important additions to the body of social work theory.

Hearn stresses that while social work can and must utilize the insights and methodology from related fields, ultimately it must formulate its theory in terms of its own function. An approach to theory building in which practitioner and scientist may collaborate at every stage has been advocated as the approach which will best serve to improve social work service and thus enhance the profession.

The principal factor which has drawn the GS theorists together is a series of convictions which they share in common about theory and theory building.

"General systems theorists believe that it is possible to represent all forms of animate and inanimate matter as systems;...They believe that the unification of theory in the physical and non-physical world is desirable and ultimately attainable, at least to some degree. Accordingly, they contend that there are properties

which are common to systems of every order, although manifest in different forms, and that there are universal laws which describe the structure of systems and their manner of functioning."(3)

Hearn examined the philosophical base for theory building. He postulated that a theory developed in one field might serve to suggest working hypotheses whose utility and generality could be determined by applying and testing them in other fields. This belief is a basic tenet of GST.

His motivation is synonymous with the motivation of other scientists in the GST movement. These scientists of diverse fields are working together for a twofold purpose. By examining what has been learned in other fields they hope to discover paths to new knowledge in their own spheres; and they hope to contribute to a growing body of unified science.

Hearn considers the nature of the universe and the nature of human nature. He entertains the idea of the continuous creation of a continually expanding universe, suggesting that the universe has been and always will be an open system. Hearn states that the organismic model is the most appropriate for the overall conceptualization of human organization in its various forms.

"There is a dynamic interplay among the essential functional sub-processes or sub-systems in the organismic system which enables it

to maintain itself in a homeostatic steady state. Assuming a sufficient input of material from its environment, the organism develops toward a characteristic state despite initial conditions (equifinality). All of this is accomplished through an automatic self-regulatory process....All this would seem to be particularly relevant to a theory of social work practice based as it is upon the idea that human beings are continually in a state of approaching, but never reaching, their full potentiality.... Because social work is concerned with the organism especially when it is under stress or when normal regulatory processes have broken down, it may be useful to refer in a general way to the various pathological conditions which might develop in organismic systems."(4)

The open organismic systems construct chosen by Hearn holds that:

"If individuals, groups and communities can all be regarded as systems, and if there are certain properties common to them all, it seems likely that there may also be certain common principles that define their operation and that the latter may form a part, at least, of a unified conception of social work. This form of the systems construct seems to provide a means, as well, of representing particular individuals--in groups--in communities--as a single dynamic complex; such a representation, if successful, would provide an even greater hope for the development of a unified view of the social work process."(5)

Hearn assumed on the basis of observation and logical deduction that, in order for groups to exist as unitary organisms, such functions as the formulating of a group

value system, the defining and maintaining of the group's boundary and the control and coordination of members' actions must exist. He identified many functions.

It seems possible to represent every situation in which a worker renders service as work in and with a system. Every relationship in professional social work involves work with individuals in groups, in organizations and in communities. The worker is concerned with this total complex at all times, although his immediate concern may be with a particular part. The social work process can be linked with the concept "system" and provide the framework for a comprehensive theory of the helping process.

Hearn elaborates on the high degree of correspondence between the concept of social systems or the manner of conceiving human organization in terms of structure, function and process, and the way in which the biologists and psychologists have conceived them as open organismic systems. The construct he proposes is evaluated to determine whether it is likely to provide an adequate means around which to organize a common conceptual framework for representing the social work client--whether that client be an individual, a group, a community or some continuous complex of all three.

The Berkeley theses were the first group research projects to attempt, at a graduate level, to explore GST in its possible application to social work.

These studies drew heavily on Hearn's monograph, Theory Building in Social Work, and his unpublished manuscript, Theory of Group Development. The basic theme of these group research projects, the applicability of GST to social work and the theoretical base for the continuum of this work, was provided by Hearn's monograph as a schema which could be utilized by the social work profession in developing theory to refine its mode of practice.

Since Hearn's monograph was written in 1955, there have been four studies. They endeavored to define their value assumptions, to attain systematic knowledge and to develop a theory to provide a framework for better practice in social work as a profession. These theses provided a sub-structure for the current series of projects and will now be discussed in chronological sequence.

Social Work and General Systems Theory(6) was the first in a series of group research projects undertaken to explore GST in its possible application to social work. An attempt was made to lay the foundation of study by reviewing Hearn's monograph. The research group determined the philosophical viewpoints which represented their thoughts and feelings. Thus, the study developed a statement of philosophy regarding Man and the Universe and formulated a position concerning the nature and purpose of knowing as proposed by the monograph.

The group further developed individual interests and beliefs in social work. One member of this project discussed the choice of theoretical models in application of GST to social work. A second member discussed the strategy to be employed in developing preliminary steps to the use of GST in theory building. Another member explored the possibility of including Freudian theory in a GS approach, by an attempt to test the extent to which Freudian theory may be integrated with GST. Others described an individual, a group, an agency and the social work profession in GS terminology.

The group suggested that this project would contribute toward the further development of social work theory by providing a new way of examining some of the various aspects of social work and by providing a common language for communicating with other fields of science.

Social Work and General Systems Theory(7) was the second in a series of group research projects undertaken to further explore the previous project. The study is based on Hearn's monograph(8) and the 1957 report.(9) This group was also stimulated by the statement in Hearn's monograph that a researcher's value orientation should be made explicit. The group developed and set forth a statement which provided the participants with a common value orientation in their approach to social work and GST.

This group research project developed three tasks which formed the core of the study:

1. To determine how the concept "generic" has been used in the literature by reviewing in the literature the various uses of the term generic and determining whether a generic process had been defined.
2. To develop a theoretical model of a social work complex based on GST by attempting to develop a model of the social work complex in which it was assumed that social work occurs.
The complex was seen as consisting of individuals, groups, organizations and the community.
3. To take the preliminary steps in developing a procedure for analyzing a case in terms of GST.

The group recognized that these formulations were the schematic presentation of the beginning steps toward a generic conception of social work. They expressed the hope that their formulations would be further refined and empirically tested.

Toward a Generic Conception of Social Work Practice--

A Method of Analyzing Teaching Records(10) was the third in the series of group research projects undertaken to explore a generic conception of social work practice. The project developed a method of analyzing teaching records in terms of what the worker does.

This project utilized a different approach in exploring the possibility of a generic theory of social work. Where the previous projects considered the generic in terms of the client, this project was an attempt to develop a methodology for analyzing the content of teaching records in terms of the practitioner.

The project analyzed practice as it is represented in case records that were used to convey the casework, group work and community organization methods to student social workers. As had been suggested in the 1958 project, their domain of interest of this project held to the assumption that there is a particular process which is similar whether the social worker is involved with individuals, groups or communities. The reliability of each aspect of analysis was tested on a sample of the records. The reliability of this study was found to be too low for the findings to be useful. The group felt that the overall reliability was low because of the difficulty of the task, but also because of the lack of sufficient time to pretest and define the method adequately. The nature of the

recording, description of the interaction and the time and space involvement were cited as other reasons for the poor reliability.

This group felt that they had provided a methodology which could be utilized to answer the questions enumerated throughout the project. They felt they had provided specificity and clarity of focus, accuracy of communication and the possibility of replication of research. They recognized none of these things could be accomplished without refinement of the methodology.

Toward a Generic Conceptualization of Human Systems(11) was the latest project in the Berkeley series of group research projects. It was an attempt to develop a generic conceptualization of social work methods using the approach suggested by GST. The goal of this project was to construct a model for the generic conceptualization of any social work interaction. GST was applied to the development of two models which described, by use of a generic language, the functioning and structure of the human systems.

The core of this project was the problem of utilizing the body of knowledge formulated in GST and applying this theory to the field of social work. As it was stated, the group attempted to use the GS approach to classify problems which occur within the traditional methods of social work.

This project developed two models. One was the "Human system, its internal resources and their relationship,"(12) The second was the model of "System Universe."(13) The first model can be described as a framework of language (communication) within which the structure and functioning of human systems on all levels of organization can be described. The second model described the boundary aspects of the human system's relationships to its environment. Each of the models was complete in itself; however, they were dynamically inter-related and needed to be used together in order to describe human functioning encountered in social work practice.

Three teaching records representing casework, group work and community organization were selected to test the models. Having applied the models in the CS approach to social work, the group concluded there are similarities in the method of casework, group work and community organization. However, they recognized one of the dissimilarities existing among all levels of social work intervention is that of language. In the absence of statistical tests it is not possible to evaluate the reliability or the validity of their conclusion.

The group believed that their project provided the models to give a common basis for describing human

relationships on all levels of organisation, thus taking a step forward to a generic conceptualization of social work methods.

In summary, the first project, completed in 1957, reviewed Hearn's monograph and attempted to lay down the philosophical base which Hearn suggested to be an essential step in theory building. The subsequent projects accepted this base and attempted to apply GST to social work in a variety of ways. Each group, including the present study, chose different avenues of approach to the problem. None followed the recommendations of the previous projects. The present group chose an independent and original way of applying GST to social work because it was felt that previous studies were inconclusive but indicated that further exploration in the directions which they had taken would be unprofitable.

One additional source of GST will be mentioned before turning to the literature of social work. This is an unpublished manuscript, Theory of Group Development, by Gordon Hearn.

He examined the concept of the group in terms of the characteristics derived from the interaction among the members. He accepts at the outset the definition of E. Blumer:

"Like Blumer, we are inclined toward the view that, 'Human association should be viewed in its most

fundamental form, namely, that of two human beings interacting upon each other.' One must have a clear understanding of the nature of the interpersonal interaction process before one can hope to understand the nature of groups."(14)

Hearn then sets forth his basic premises:

"It is our contention that the only valid way to study a group is to view it as the product which results from the interaction of individuals operating within the context of a larger social system. One does not, in fact, see the group when one looks only at the individuals composing it nor only at the culture in which it is embedded; and we submit that it is impossible to look only at the group, unless one accepts the 'group mind' concept, which we do not.

"Within a larger social context individuals come together and interact. As time goes on their interactions become patterned. Their interactions tend to assume somewhat the same form during successive situations and the form which is unique to each particular group of interactors. Furthermore, as we shall show, patterns evolve out of the interactions related to different aspects of the group. Status relationships become defined, roles become patterned, a certain value orientation evolves and a certain system of communication is developed, to name but a few. These aspects and others which evolve in some form or other in every human group we shall call the universal properties of groups. Indeed, it is the manifestation of these universal properties, considered collectively, which is the group."(15)

Hearn asks, "What is a group? In what sense do groups exist? What is the boundary of a group?" Through these questions he is able to provide the reader with basic definitions of terms used throughout the manual.

In this project Hearn's constructs of culture and personality are crucial to an understanding of the behavior and development of the individual and the process of socialization he experiences. Social change takes place when man attempts to change his environment. The group has a role in the reciprocal processes of socialization and social change.

Hearn also elaborates on the universal properties of groups. These properties may be defined as those certain characteristics which may be observed in some form and degree of development in every human group. Each property serves a special purpose in the functioning of the group and affects the individual group members. There is an interrelation of a given property to all others in the functioning whole which is the group. The eight universal properties of groups are the motivation system, the belief system, the status system, the role system, the relationship system, the communication system, the executive system and the institutional system.

Hearn discussed the two general approaches to the description of what happens to groups over time. Examination can be conducted in accord with the phasic and/or

dimensional approach. The value bases for conceptions of group maturity can be oriented to the normative or descriptive view.

We now turn to an examination of social work literature in relation to GS. An exploration of the social work literature for the generic approach to social work was limited to publications since 1958 because the Berkeley groups had done thorough research prior to this date. Books on social work, whether dealing with case-work, group work or community organization, universally give recognition to the new trend toward the generic. The authors accept the fact that all three areas are based in certain generic principles; however, definitions of the generic content are lacking and the emphasis is primarily on the assertion that the specific area with which they are dealing is concerned with generic social work principles.

A search of the journals included:

Child Welfare
The Group
Jewish Social Service Quarterly
Journal of Orthopsychiatry
Proceedings of the National Conference
of Social Workers
Smith College Studies in Social Work
Social Casework
Social Work
The Social Worker
Social Service Review
Social Work Yearbook

Fourteen articles dealing with the generic approach were found among these journals. Three had more than a

review of the trends and general statements about the problems involved in determining the content of the generic approach.

In 1959, Harriett Bartlett suggested that social work needed a broader theory base than that offered by the generic-specific concept.

"It is now clear that the description of social work practice will eventually emerge in the form of a configuration, a whole with interacting parts."(16)

There will be common elements in each field of practice but each with its own special emphasis and use.

"This...enables us to progress from...the generic to the specific without any sharp division or dichotomy, through the use of a single concept appropriate to practice."(17)

A curriculum study of the New York School of Social Work made by Herman Stein in 1960 defined as a common base for all students such subject matter as philosophy and history of social work, social policy, administrative process, government and public welfare, a multidimensional view of human behavior (including biological, psychological and socio-cultural perspectives) and a scientific approach to social work knowledge.

"The curriculum objective has been seen as the providing of as large a common base in knowledge, values and skills as possible, with differentiation in training along the line of primary method and a minimum of sub-specialization within methods."(18)

Irving Spergel, in 1962, proposed a multidimensional approach to social work. "As social work draws closer to the social and behavioral sciences, it tends more firmly to subscribe to the values of conceptualization, scientific method and theory construction."(19) He states that social work is now drawing conceptual models from sociology and social psychology. Both casework and group work have attempted to incorporate concepts from ego psychology, role theory, organizational theory, sub-cultural theory, class or stratification theory, reference-group theory and small group theory.

"Ideally, the social worker requires a model for practice which systematically incorporates and integrates knowledge and directions for action derived from the various relevant bodies of understanding about human behavior and socio-cultural organization...A multidimensional approach to social work practice is required at this stage. However, this kind of approach requires a major shift in the way social work is practiced...It is the thesis of this paper that at the present time the social worker should develop his practice according to a multidimensional model in as integrative a fashion as current social-science and behavioral-science theory permits."(20)

These three articles show a developmental progression toward a conceptual framework which leads naturally and logically to the focus of this research project.

This chapter has reviewed the literature studied by the group in order to understand GST, to ascertain its

role in the continuing group projects, to formulate a conceptual model and to ascertain what work might have been done to relate social work concepts to GST.

Another body of literature was read in order to obtain concepts of casework, group work and community organization as traditionally conceived. This material will be cited in subsequent chapters since it relates more to the testing of hypotheses than to background.

From a review of the literature in the fields of GST and social work, the group came to several conclusions. GST is still in a stage of formulation and much of the literature is devoted to theorizing at the deductive level. There are no empirical studies to specifically test the hypotheses. The application of the statistical method has yet to be made.

In the social work literature the few studies which have been attempted are inconclusive and seem to be hampered by difficulties encountered in the clarification of terms, isolation of measurable concepts and a lack of uniformity.

At no point, neither in GST literature, in social work literature, nor in the previous Berkeley studies, was there set forth any framework or guideline which this group felt had proved to be practical enough to pursue. With this background, then, the group embarked on its own original thinking, bearing in mind the lessons

learned by their predecessors, and attempted to create a model which could be empirically tested for reliability and validity. The subsequent chapters will be devoted to the methodology utilized in developing this model and the findings resulting therefrom.

Chapter Notes

1. Bertalanffy, Ludwig von, "General System Theory - A Critical Review," General Systems Yearbook of the Society for General Systems Research, Ludwig von Bertalanffy and Anatol Rapoport, et., University of Michigan Press, Ann Arbor, 1962, p. 2.
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6. Carlson, Virginia, et al., Social Work and General Systems Theory, unpublished group research project, School of Social Welfare, University of California, Berkeley, California, 1957.
7. Cutler, Patricia, et al., Social Work and General Systems Theory, unpublished group research project, School of Social Welfare, University of California, Berkeley, California, 1958.
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11. Bolter, Agnes, et al., Toward a Generic Conceptualization of Human Systems, unpublished group research project, School of Social Welfare, University of California, Berkeley, California, 1962.
12. Ibid., p. 1.
13. Ibid., p. 1.
14. Hearn, Gordon, Theory of Group Development, unpublished manuscript, 1957, Chapter I, p. 23.

15. Ibid., Chapter I, pp. 27-28.

16. Bartlett, Harlett M., "The Generic-Specific Concept in Social Work Education and Practice," Issues in American Social Work, Alfred J. Kahn, ed., Columbia University Press, New York, 1959, p. 181.

17. Ibid., p. 182.

18. Stein, Herman D., Curriculum Study, New York School of Social Work, Columbia University, 1960, p. 9.

19. Spergel, Irving, "A Multidimensional Model for Social Work Practice: The Youth Worker Example," Social Service Review, Volume 36, March, 1962, p. 62.

20. Ibid., p. 63.

CHAPTER III

METHODOLOGY

Following is an account of the step-by-step process of the project, including the means used in decision making, the strategy of member assignment in sub-groups, methodology underlying production of data, and the rationale for the selection of statistics.

To isolate and analyze systematically a universe of study required a series of decisions. The means used in such decision making were: logical deduction and induction, group consensus and quantitative evaluation of data.

The first step was an investigation of GST. Approximately thirty-one books and articles were studied by the group and discussed. The purpose of this was to find out whether GST could be accepted as possibly useful in explaining the process of what takes place in social work practice.

From the discussions of the literature, a plan evolved to link GST to social work in such a way that a testable hypothesis could be offered. This required further readings and discussions in GS literature with a specific aim of finding which properties of GS could be adapted to social work methods in the field. Readings

were annotated and presented by different members of the study group with suggestions how they might be used to identify elements of GST in social work practice.

These readings were then discussed and it was agreed by consensus which concepts would be incorporated into the project. (See bibliography section Chapter Two.) The review of the literature provided a philosophical base for development of a new approach to conceptualizing social work.

This approach emerged in the design of a model of GS concepts. Because these concepts were highly abstract, and because a project goal included an empirical test in social work context, the model was designed with operational utility in mind.

The review of the literature had suggested that relationships existed between the general properties of systems and the properties of open organismic systems. Credible relationships were traced between these groupings of properties. Before detailing what was acceptable as a credible relationship, it was found necessary to introduce and define terms.

By usage, the groupings of properties became known as "tiers". There were subsequently established tiers numbered one through four in descending order of abstraction.

- I. First Tier - General properties of systems.
- II. Second Tier - Properties of open organismic systems.
- III. Third Tier - Properties of humans as open organismic systems.
- IV. Fourth Tier - Properties of human groups as open organismic systems.

See Appendices pages 86-90 for the entire model. Each property within a tier, again by customary usage within the group, was called a "category".

Each tier represented a level of abstraction with the more abstract above. Each category of a tier was discussed in relation to others of that level to gain consensus as to its appropriateness at that level. Each category was then discussed in relation to categories of higher and lower levels and the general characteristics of each level were deduced logically from the highest level.

When the number of relationships between tiers was too great for logical analysis, a credible relationship was said to exist if an example assigned to one tier could be logically translated to tiers immediately above and below.

Criteria for acceptance of the model as a whole were formulated as follows:

1. The cases of each category within a given tier can be related to instances in the subordinate tier.

2. Events of a given category can be related to cases above and instances below.
3. At least one relationship can be identified between the categories of each tier.
4. Instances of one tier may relate to more than one category above or below.
5. There is no case without at least one relationship to an instance in a tier above or below and between categories in a given tier.

The experience of the project participants demonstrated that the model met all these criteria in every case tested.

Number four above was called "overlap" and was a frequent occurrence. Overlap in part stemmed from a quality of the categories. They were not mutually exclusive. Overlap, however undesirable, was acceptable in this project because its presence did not necessarily question credible relationships between tiers. The aim of the group at this point was to validate the internal consistency of a model which would bring the abstractions of GST to a level at which social work experience could be meaningfully included in categories at the level of practice.

If the lower tiers of GST categories were related to the higher tiers and if social work actions could be

related to the lower tiers, then a relationship to all tiers would be established.

The process of establishing credible relationships through correspondence and syllogism is illustrated in the following case. Because the model is in verbal form and made up of categories whose symbolization was the product of general usage, there was heavy reliance on definitions as a means toward clarity.

First tier, General properties of systems, item two, is "They are part of a dynamic supra-system". Systems then are in motion, and necessary to motion is change.

Second tier, Properties of open organismic systems, category five, "The input and output move to a steady state". The case of change is symbolized by "move", and in this instance, movement to a steady state.

Steady state becomes the case for a category in tier number three, Properties of humans as open organismic systems. The category is ten, "Humans in the steady state resist changes". The symbol "steady state" is identical to the case of the tier above, and in tier number three has the additional quality of resisting change.

In the case of "humans resist change" there exists in tier number four, Properties of human groups as open organismic systems, category nineteen, "The group has a maintenance system which serves to continue the existence

(physically or conceptually) of the individual members of the group through preventive or remedial action". In this instance, resistance is maintained as one category of the group.

Thus the representation dynamic, or motion, acquires specificity in successive instances with (a) movement to a steady state, (b) resistance to change from that state and (c) maintenance of this resistance, a set of relationships not immediately apparent.

When the model had reached this stage, some members of the project wished to develop it further. The rest wanted to direct their attentions toward a more empirical area of study. Because the project could profit by further study in both these areas, two sub-groups were formed. The sub-group working with the model came by usage to be called the "theoretical" group, the other sub-group, the "empirical" group.

In project meetings these sub-groups met independently first and then joined to inform each other of developments. There were five such meetings. This format was then discontinued in favor of unified meetings.

Content of the meetings described above is best reported in the context of the unified meetings which followed.

The theoretical sub-group reported on its exploration in the interactional area of social work phenomena. An

interest had developed around the question of what takes place between client and social worker. A decision was made that a study of interaction, though vital to a furtherance of social work theory, would not be a fruitful area for this project. There would be inherent difficulty in identifying interactional data; and an application of GST to social work, to lend itself to quantification, should pertain to more specific phenomena.

The empirical sub-group reported on its problem with a semantic question. In social work there are vocal and material symbols used by common consent. There is also a group of symbols indigenous to GST. The symbols of each field of knowledge, it was postulated, have similar referents, but a pursuit of either field does by customary usage of symbols tend to obscure this.

The substance of these reports from sub-groups, i.e. the need for specific social work phenomena and the problem of semantics, led to the following reasoning. The social work phenomena to be used in the project should be as specific and identifiable as possible. "What the social worker does" met this criterion. Instances of social work behavior: i.e. action, activity, performance, etc., were called "action concepts".

The project's interest in this area was consistent with another address to the subject.

"The action of the practitioner is the point in time and space where the social worker's existence can affect the course of events for individuals, groups and communities, if that course is to be affected at all. Action of the worker is, therefore, the stuff of practice."(1)

This step in the project did not resolve the question of semantics. It did begin to define the universe of inquiry into the social work field.

As to semantics, the task was to relate the symbolizations of social work actions to the GST symbolizations contained in the model, particularly the fourth tier. A number of possibilities were examined.

First, a direct test of professionals currently employed in the field was considered. Such a test would have inquired of social workers by questionnaire as to their actions that they could identify with GST and more specifically the model's fourth tier. This was discarded because such a test could not presume the professional's knowledge of GST. A sufficient indoctrination to GST as a preamble to the test was prohibitive.

The second possibility was a test utilizing case records used for teaching purposes. Action concepts from such records might be applied to GST. This was also discarded because terminology in such records would require translation and application by a testee familiar with GST.

Third, a test using social work literature whereby action concepts would be identified and applied to GST

was considered. This also was discarded, again because it presumed knowledge of GST by the testee.

This latter possibility was of particular interest in that social work literature presented social work behavior within the traditional methods of casework, group work and community organization. An additional dimension of the project was thus suggested for testing. How might action concepts, selected from the traditional areas, align themselves with the concepts of GST? Is there repetition, an aggregate of actions common to all areas? Does each method employ unique behavior, and if so, which actions?

By identifying action concepts with their source from social work literature, answers to such questions could be inferred.

But such questions presumed an analysis of data, and such data awaited resolution of the semantic problem.

A fourth possibility was further refinement of the model. A fifth tier could employ symbols familiar to social workers. This idea was discarded. Group members were able to relate action concepts, randomly selected, to the fourth tier. Before further effort was expended on the model, it should be tested beyond the random application of action concepts which might chance to apply. A test at this point could offer perspective on the model's utility and on the question of whether or not to refine the model.

A fifth possibility was a test within the project. This aim was accepted. An operational test required knowledge of GST and social work to resolve the question of semantics. Project members fulfilled this requirement.

The rationale was that the validity of classifying accepted behavior of social workers into GST would depend upon the reliability with which it could be done. High correspondence between traditional and GST systems would permit the selection and interchange of behavioral items for research practice or teaching purposes without re-interpretation. Reliability among categories of GST would test the external validity of the systems, whose internal validity had been accepted.

The next step was to devise a means whereby project members could apply action concepts to the model's fourth tier in such a manner as to produce analyzable data.

This step began with a review of current literature on social work practice. This literature with two exceptions was selected from a current list of recommended references for a social work library(2) and/or a list of recommended reading in a leading school of social work(3). References so selected were found to contain a maximum number of action concepts.

Only current social work literature was reviewed. It was reasoned that current concepts represent an accumulation of theoretical and empirical knowledge. Current

literature then profits by past writings and a representation of historical literature was not necessary to the project. Current literature also excludes those concepts which have not withstood over a period of time a test of theoretical or empirical utility, nor general acceptance.

Action concepts were identified as verbs and their modifiers. All members of the project assumed responsibility for reviewing references.

Examples of action concepts used are:

1. Enables participation in identifying social problems.
2. Enlists the interest of key persons in the community.
3. Relates group to member.
4. Helps group accept changes in the group from within.
5. Appraises client's strengths.
6. Helps client clarify his feelings.

See Appendices pages 91-92 for the literature from which action concepts were drawn.

Action concepts were then listed, each on a three by five card. There was a high incidence of duplicated concepts within each of the traditional methods, as well as among them. Next, the duplicate cards were excluded within each of the methods of casework, group work and community organization, but not among them. This left 427 cards. Numerals 1 through 427 were placed on each card. The traditional method from which it was selected was identified by assigning a range of numbers to each method. This also facilitated later tabulation.

Discussions next focused on ways to adapt the action concepts to test the conceptual model of GST. If, on the most concrete level, the action concepts could be consistently classified by social workers into discrete categories taken from the GST model, then the model would be useful as a tool in classifying social work concepts to the degree that a direct and efficient relationship between systems would be established for research and other purposes.

Since the fourth tier on the conceptual model was the most concrete level, it was decided to adopt this part of the model to test the theory. It was made up of 21 different categories of properties of human groups as open organismic systems as related to GST.

The members of the study project were experienced social workers in that all had served in social agencies as social workers. This service averaged more than eight years for the ten members of the project. It was planned that they would sort the 427 actions into the 21 different categories according to the action stated upon the card. A twenty-second category was provided for cards that could not be classified into the 21 GST categories.

As stated previously, the purpose of this sort was to find out how consistently the ten social workers would sort the cards. This would be done by determining statistically how this sort varied from a random or

hypothetical distribution. If there was a high correlation in how social workers familiar with GST sorted the action concepts according to the theoretical model of GST, then this method had promise as a tool to predict future application of GST to social work practice.

A standard method of sorting the cards and tallying them for statistical purposes was worked out so the results would not be biased by differences in procedure. (4) A training session was held immediately prior to the first classification. The group discussed their experiences in sorting after the completion of the sort.

Each category was discussed to minimize differences in procedure and meaning. If a member disagreed or did not seem to understand the category, it was discussed until a consensus was reached about the meaning.

Standards for tabulating the results of the individual sorts onto a master sheet were worked out so the code number of each card would appear recorded in that category. Each member was instructed to shuffle the cards thoroughly before and after each sort so the cards would be randomly distributed. Each member was also cautioned about discussing the results of his individual tally until all individual sorts were tallied on the master sheet. Hereafter this procedure will be referred to as the independent sort.

On the average, it took each member about four hours to sort the 427 cards into the 22 different categories and record the results.

A second sort, known hereafter as a group sort, took place approximately one month later and this sort was undertaken to test the reliability of the first sort. It was undertaken in a slightly different manner in that each of the ten members who sorted all 427 cards on the individual sort now only had to sort 42 cards assigned in a randomly distributed manner.

The results of the group sort were compared statistically using the Chi square test of significant difference from a random distribution. If the null hypothesis was correct, that there was no significant difference between the two sorts, then social workers could consistently classify social work concepts by using the GST model.

A third sort, known hereafter as a traditional sort, was then undertaken by a different group of twenty social workers consisting of the first-year class of graduate students. This group was not familiar with GST. Service experience in this group averaged over seven years.

The purpose of this sort was to find out whether social workers not familiar with GST could consistently classify the action concepts into the traditional categories of casework, group work and community organization

by examining the action concept as stated on the coded card. These were the same cards used by the members of the study project, and they were to be tested by a group not familiar with GST. If this group could not consistently classify concepts into the three traditional methods, then the concepts were not clear as to their source.

The traditional sort was undertaken by telling the group of social workers not familiar with GST that they each would receive 21 cards upon which was stated some action concept taken from the traditional methods. These cards were randomly distributed and respondents were asked to carefully examine the action concept and to place it into one of the three classes. Each concept was classified by two respondents. They were instructed to classify the cards only if they would align with one of the traditional methods. The remainder were not to be classified. This remainder, it was reasoned, would identify generic concepts. Results of the independent sort and the group sort could then be compared to results of the traditional sort and inferences drawn as to the utility of classifying social worker actions by the traditional methods versus GST.

The results of this traditional sort were recorded and tested for reliability.

While a number of statistical tests were explored or computed for all of the tests, the Chi square was

considered most appropriate. Parametric tests were difficult to interpret because of the uncertain relations on the continuum of interaction of the categories and because of departures from the normal distribution of histograms.

The Chi square used in the first approximations permitted analysis of different components contributing to statistical error. Thus, if lack of reliability resulted, its source could be more readily ascertained. The first approximation could then lead to more refined analysis if warranted.

The confidence level was set at .01 because Type II errors would be caught in later analysis, and at this stage of exploration it was important that Type II errors might not exclude a lead that could later prove valuable with perhaps slight modification. The test was to be on the numbers classified similarly in the two sorts, and this would yield only the maximum possible reliability achieved, not the exact item by item consistency.

On the subsequent tests it was desired to see how much agreement or lack of agreement existed in classifying each concept and to obtain a summary statistic. Since the literature on indices of agreement varies somewhat as to desirable levels of confidence or concordance, and since studies in the social sciences have achieved a wide range of conformity, 90 per cent agreement was chosen as an appropriate level.

The index used considered the modal category and deviations as a whole from that category. The amount of direction or variance was not considered, partly because of the absence of previous analyses as to the unidimensionality of the 21 categories. The 90 per cent level was thus neither theoretically nor empirically too rigorous, as will be seen in the next chapter in which the index and its use will be discussed.

Procedurally then, the project reviewed the literature of GST, organized the concepts of GST into a model, selected action concepts from social work literature, applied these action concepts to the model via card sorts, and selected statistical means to analyze the data resulting from these sorts.

The next chapter will detail the statistical analysis of data.

Chapter Notes

1. Gordon, William E., "A Critique of the Working Definition," Social Work, National Association of Social Workers, New York, October, 1962, Vol. 7, No. 4, p. 5.
2. Building a Social Work Library, Council on Social Work Education, New York, 1962.
3. Basic Books in Social Work 1964-1965, unpublished list prepared by Columbia University School of Social Work.
4. Mark, Louise M., Statistics in the Making, Ohio State University Bureau of Business Research, Columbus, Ohio, 1958, Chapter 13.

CHAPTER IV

FINDINGS

The project has attempted to prove whether GST could be classified with traditional action concepts in a relatively simple and meaningful way. From the traditional literature a number of action concepts were extracted. These concepts were then classified, utilizing a sort method which was explained in detail in Chapter Three. It was the assumption that if these concepts could be reliably classified into the GST framework, a questionnaire could be devised to test GST in practice.

In order to determine if there was a significant difference between the independent sort and the group sort, a null hypothesis was formulated. This hypothesis stated: "There is no significant difference between the independent sort in the distribution of the action concepts among the GST categories.

To test this hypothesis a Chi square was employed utilizing a two-sample test. This test is applicable where the researcher is interested in the number of subjects, objects or responses which fall in various categories. The researchers wished to test the hypothesis that these responses did not differ in frequency; that

is, that no significant difference existed between an observed number of responses falling into each category and an expected number based on chance. The level of significance chosen for the test was .01, with the expectation that if the null hypothesis were accepted a more rigorous test would be applied. It would be applied in each case to determine the reliability with which each item was classified.

As a first approximation of the reliability of the independent group sort, a Chi square was calculated. The data used was the total number of cards sorted into the various GST categories by the individuals independently compared to the totals sorted by the group as a whole. The assumption was that all the traditional concepts could be classified into categories of the GST framework. By this method some estimate of the maximum consistency between the two sorts could be measured. This would determine whether the two sorts classified the cards into the GST categories with no significant difference.

Next, Chi squares of the traditional methods were calculated to determine if those concepts from each method were reliably classified into the GST framework. The rationale was that the action concepts from each traditional area could also be classified into the GST framework. The null hypothesis was extended to these traditional methods with the assumption that the two

sorts were again not significantly different. The residual category was found to contain only a negligible number of illegible cards. Because of this, only the twenty-one categories derived from GST were used in the calculations.

The results of these Chi squares are shown in the following table:

TABLE I
CHI SQUARES FOR THE SORTINGS OF
TRADITIONAL ACTION CONCEPTS

Concepts	Sorts Compared		D.F.	χ^2	Null Hypothesis	
	Independent	Group			P	Decision
Total	Individual	Group	20	70.36	<.001	Rejected
Group work	"	"	"	55.80	<.001	"
Casework	"	"	"	49.56	<.001	"
Community Organization	"	"	"	20.36	>.50	Accepted

The Chi square for the total sort of 70.36 was significant much beyond the .01 level. With a Chi square this large, the null hypothesis that chance factors would be responsible for the differences was rejected. Thus, there was the probability that factors other than chance were operating to account for so large a discrepancy between the two sorts. Further inspection of the contingency table of the total sort (see appendices page 108) showed

that the group sort accounted for more than 90 per cent of the Chi square and less than 10 per cent was attributable to the independent sort. Contributions of each GST category can be seen from these tables.

In the sort of traditional concepts both of casework and group work, there was indicated the same lack of reliability observed in the total sort. The null hypothesis was rejected. The assumption was that factors other than chance were continuing to operate. With further examination of the contingency tables for these methods, it was found that the group sort accounted for more than 90 per cent of the Chi square differences while the independent sort contributed less than 10 per cent.

This factor of the group having the highest Chi squares seemed to have some significance. It suggested that as the group became more familiar with the concepts and the GST categories, the discrepancy in the sorting method became greater. The second sort, that is the group sort, took place approximately a month after the independent sort, and during this time the group had markedly increased its experience with handling the categories, discussing the difficulties of the original sort and pooling their experiences. Therefore, it seemed to indicate that the factor of experience was associated with less reliability rather than greater, contrary to expectations.

Community organization concepts yielded a Chi square which required that the null hypothesis be accepted. This Chi square indicated that there was no significant difference between the two sorts for the concepts of community organization. Therefore, further analysis was necessary to determine why the null hypothesis was accepted for this particular set. Results so far were a first approximation and further item analysis was indicated to test actual rather than potential reliability.

In this instance there was both theoretical and statistical indication that possibly the traditional concepts for community organization taken from the literature could be consistently identified with the GST framework. The results of the first two tests, group work and casework, did not warrant further analysis beyond careful inspection of the components of the total Chi square. No particular factors accounted for the discrepancies and the pattern of responses varied from sort to sort and method to method.

A measure of agreement was devised and called the "Index of Modal Agreement"(1) to further test the reliability of classifying the concepts on an individual basis. The index consisted of one-hundred times the mean of the sums of the proportional frequency with which each concept fell into its modal GS category.

The index would thus yield in a percentage form the average number of times judgments fell into a modal category or the per cent of judges agreeing on overall concepts with the modal judgments.

The index would not show how scattered deviant opinion might be. Variance could not be shown because categories were nominal without known ordinal relationships to one another.

The following table shows the result of this measure:

TABLE IX
INDEX OF MODAL AGREEMENT

Community Organization4079
Group Work4033
Casework3868
Total4005

Community organization yielded an index of 40.79, or approximately 40 per cent of maximal agreement. As a further test the statistic was extended into the other areas. This figure was fairly constant throughout the different areas, as can be observed from inspection of the tables. The lower limits of confidence considered appropriate were set at 90 per cent on this index. This set a confidence level less powerful than is customary.

Because of the nature of the study and number of respondents, moderate limits were felt to be desirable because Type I errors were more hazardous.

Community organization concepts yielded a low reliability in classifying from this traditional method into the GST framework. Though the Chi square for maximum limits of reliability suggested that the null hypothesis be accepted, still the internal, actual reliability was found to be very low. This low reliability was consistent throughout all the methods tested.

Inspection of the data showed that no significant increment in reliability would be gained in taking two categories rather than the modal one as the basis of agreement.

The traditional sort was also subjected to statistical procedures as a check to determine if action concepts extracted from the traditional literature were identifiable into the three traditional methods. The twenty-five first-year graduate students were asked to sort these concepts. Specifically, they were to place the action concepts into the appropriate categories from which, in their opinion, the concepts came. This procedure was discussed in detail in the preceding chapter.

Of the 427 cards, respondents were able to sort 232 into the traditional methods. This was approximately 55 per cent of the total number of cards. Of the 232 sorted, they were able to identify properly 183 traditional

concepts, or 43 per cent of the total. A Chi square was then calculated on the 232 sorted to determine whether chance factors were responsible for the distribution. It was found that reliability of sort was significant at the .001 level of confidence. This was an indication that the residual sort was reliable due to factors other than chance.

Of the total number of concepts, more than 50 per cent were not sorted into their traditional classes with an acceptable degree of accuracy. There was a great deal of difficulty in classifying concepts. The group reported that many concepts could be classified as more than one method. This indicated a possible generic factor. However, those that were representative of specific methods could be sorted with a high degree of accuracy.

In addition to the above test further analysis was conducted on the data.

The traditional sort indicated a possible generic factor which made a certain portion of the cards unclassifiable. (See appendices pages 93-104.) It was decided to determine whether these cards were sorted in a more reliable fashion in the independent sort. To test this the "Index of Modal Agreement" was utilized.

It was found that these cards still yielded only a 41.7 per cent agreement among the individuals. An Index of Modal Agreement was also computed for the cards which

the traditional sort was able to identify. This indicated agreement of 39.2 per cent.

Neither the generic nor the traditional factors increased the reliability of identifying action concepts into GST framework.

Histograms were devised to determine whether the classification of the action concepts into the GST categories followed a consistent pattern. Upon inspection it was found that a great deal of variation among categories was present and placing the concepts deviated a great deal from category to category.

As a further check a Spearman-Rank Order Test of Correlation was calculated. This correlation coefficient yielded the same results as the Chi squares and also indicated that there was no significant relationship between the group sort and the independent sort.

In summary, it was found that to classify and identify traditional concepts extracted from the literature into GST categories at this level of abstraction and by this method was not possible with any acceptable degree of reliability. To quote Paul Meadows, "The adequacy of the model is partly a function of the level of symbolization of the model." (3) He also indicated that each model has its own value structure and if the model is too abstract its values are difficult to translate into operational terms. In addition, the model also stands

for reality which insists on its own special test of truth, but if the model is too abstract, the establishing of a reality base becomes difficult.

To be more specific, the following results were considered possibly significant:

1. GST could not be interrelated with the traditional action concepts in a relatively simple and meaningful way.

The GST categories were interactional, while the concepts from the literature were of the action type. The latter showed what the worker did rather than what went on in the relationship. The value structure also differed. The literature seemed to emphasize techniques to be utilized and the GST framework attempted to lay down some philosophical base for action. At this point, the technical base and the philosophical base are not related and no significant relationship could be established between the two systems except in general.

2. The traditional action concepts extracted from the literature could not be identified as representing their various methods in any clear-cut manner. Many of the concepts may have been generic or common to all three methods and hence not classified into a specific methods area.

The traditional concepts which were utilized did not have the same meaning for all individuals. The definitions were subject to a high degree of individual

interpretation, although it was assumed that they had generic meaning.

A difficulty in the area of symbolization seemed to be present. This was evident in the difficulties of classifying the concepts into the traditional methods from which they were derived and the low degree of reliability in being able to identify these concepts into their referent bases. In addition, the categories were not clear-cut entities and could not be identified in reality at this particular level of abstraction.

3. The unreliability of the sorts of the action concepts make it tenuous to propose that any type of questionnaire be devised from the current data. At least the group could conceive of no fruitful way of using the concepts to relate social work theory or practice directly with GST.

4. All concepts could be classified into the fourth tier of the GST model without exception. This suggests that GST itself is compatible with social work theory and practice. It cannot become a useful and empirically valid model, however, until canons of classification have been met, operational values set or reliability otherwise improved.

5. The reported experience of both groups indicated that at least a considerable proportion of concepts may be general to the three traditional method areas.

Additional studies would be required, however, before other factors such as cues or general usage could be ruled out.

The next chapter will discuss some of the implications of these findings.

Chapter Notes

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2. Dodd, Stuart C., Specifications for Calibrating a National Value Scale, Department of Sociology, University of Washington, Seattle, May, 1949, passim.

3. Meadows, Paul, "Models, Systems, and Science," American Sociological Review, Vol. XXII, No. 1, February, 1957, pp. 3-9.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This chapter will be devoted to summarizing the previous chapters, evaluating the study and making recommendations for future developments.

The study was initiated to test the applicability of GST to the field of social work. The assumption of this applicability was based on previous studies at the University of California, School of Social Welfare, (1) and on Hearn's discussions. (2) These investigations had examined various aspects of the application of GST to social work practice. Based on this preliminary work, an empirically oriented mode of investigation was decided upon.

With this object in mind, effort was directed toward attempting to develop the tool to test empirically the theoretical constructs of GST in their relationship to social work practice theory.

A general hypothesis was developed. It was that concepts derived from GST could be related to concepts derived from the traditional conceptualization of social work in a relatively simple and meaningful manner.

To support the general hypotheses a number of supportive hypotheses and assumptions had to be developed.

The first of these assumptions was that social work practice is generic in nature. The second assumption was that traditional social work practice literature would contain concepts which were identifiable and discrete. A third assumption was that the literature accurately described what the social worker actually does in practice. From these assumptions, a supportive hypothesis was developed. This hypothesis was that there would be no significant difference among the action concepts derived from the literature of the three traditional methods of social work practice.

A final hypothesis was that action concepts drawn from traditional social work practice theory could be fitted into a theoretical framework based on GST in such a manner that a questionnaire could be developed. If social work action concepts could be fitted into the GST framework reliably, then a questionnaire could be developed directly from the literature or practice without reformulation which would lead to an empirical test.

In order to test these hypotheses, a model was constructed based on a review of social work practice theory. The second model was developed and was based on the previous applications of GST to the field of social work practice. In the model building, an effort was made to further concretize the conceptualizations of GST so that they could be more closely related with social work action concepts. From observation of the two models, it

was felt that a bridge could be made. This bridge would test the relationship of the GST model to the social work action model. On the basis of this observation, it was decided to test the relationship by the card sort method.

The card sort method would test the ability of trained judges to sort the concepts contained in the two models in a reliable manner.

In addition, the traditional action concepts were tested independently to evaluate their identifiability and discreteness in reference to the traditional three-part division of social work practice. In this test, the first-year graduate class of experienced caseworkers was used as judges. They were asked to classify the action concepts into the three traditional categories.

An evaluation of the traditional sort and the statistical tests of this sort indicated a number of conclusions. From observation of the action concepts recorded on the cards, there appeared to be a considerable number of concepts generic to the field. The judges had been instructed to sort only those cards which fitted discretely into one of the three traditional categories. Using this rule, the judges were able to classify 55 per cent of the cards into these method categories. The judges reported that there was great difficulty in sorting due to the recognition that an action concept could

be classified into two or more method categories with equal justification. They also reported that the line of demarcation was frequently quite fine in other action concepts. The body of concepts classified into the traditional categories was categorized with consistency beyond the .001 level of confidence indicating that the trouble in classifying was not due to individual or group inaptness.

The more reliable clues in classifying were commonly the objects of the action rather than the actions themselves. That is, when clients were mentioned, the concept was seen as a group concept, whereas if client were mentioned the concept was seen as a casework phenomenon. This test does not make it possible to rule out the generic nature of the social work action concepts.

A valuable future project in this series would be to pursue further the separation of these action concepts which were generic in nature. Indications were that a sufficient body of such concepts exists to make feasible the training of a "generalist", (3) that is, a social worker equipped to handle these generic concepts in the form of a general body of practice theory. The centrality of these concepts should be established.

A second conclusion might be that the methodology of the study is useful in ascertaining these generic concepts as well as in identifying semantic problems whose clarification promises further advances along these lines.

To test the relationship between the GSI model and the social work action model, the action concepts were sorted into the GSI categories on two occasions. The results of these sorts were subjected to statistical evaluation. The statistical test showed extremely low reliability between the two sorts. Further statistical testing showed similar low reliability among the individual judges in the independent sort.

The statistical tests indicated the conclusion that there is no significant relationship between the GSI model used and the social work action concepts. The statistical test also indicated that, using the traditional division of social work, the results were not significantly improved. In the traditional method of community organization, a minimal relationship was found. Further tests indicated that this relationship had questionable reliability in that the judges were not able to sort reliably in the independent sort.

Before accepting these conclusions, limitations of the study must be considered. The first of these is that the lack of reliability may not have been as severe as appeared in the various statistical measure. The index of model agreement did not take into consideration that on a continuum and with cardinal measures of agreement such as variance, adjacent responses would raise the

index of agreement. Since the 21 categories were nominal and unscaled or unordered, the model did not lend itself to this type of analysis.

The second limitation of the conclusions is related to the highly abstract nature of the concepts contained in the GST model. Even though this model is more concrete than previous GST social work models, the problem of the degree of abstraction continues. These concepts are abstractions of complex interaction within social work situations which are subject to numerous variations. The problem with levels of abstraction was not limited to the GST model. The social work action concepts were generalized abstractions of specific action subject to individual interpretations. The social work action concepts also deal with complex interactions which are subject to numerous variations within the social work situation.

The third limitation is a matter of the frame of reference. The GST model used as its basic frame of reference an interaction conceptualization of the social work process. The social work action model used as its frame of reference the social worker's action. In order to permit the classification, the frame of reference inherent in the GST model was modified to make it more compatible with the frame of reference of the social

work action. This reconceptualization was difficult and remained as a problem throughout the classification.

The fourth limitation related to the practical problems encountered in the judging process. All of the judges reported consistent difficulty not only in relating action concepts to the GST model but also in relating the action to their own experience. This factor relates to both the degree of abstraction of the concepts of GST and of social work, as discussed above, and to the assumed validity of these concepts in describing actual social work experience.

This problem can be illustrated by the fact that it was found necessary to discuss a given action concept at considerable length before any degree of unanimity could be reached as to its meaning. The interpretation of these concepts appeared to be directly related to the training and experience of the individual judge. This was especially true when each of the judges had to sort the familiar social work action concepts into the less familiar framework of GST.

Examination of the action concepts themselves revealed a lack of operational terminology, considerable emotional or polemic import and imprecision, aside from their various levels of abstraction and generality.

(See Appendices page 93.)

The expectations that action concepts in the literature would be at a lower level of abstraction than the lowest tier of GST categories was found not to hold. A study of relations among the levels of abstraction in the two systems would make an interesting and possibly revealing follow-up.

One way to resolve the limitations would have been for the judges to conceptualize the social work action concepts within the theoretical framework of GST before classifying. If this had been done, the purpose of the sort would have been negated.

It could well be that in order to investigate the relationship between GST and social work practice it would be necessary to reconceptualize social work action into terms which are compatible with the interactional and conceptual frame of reference of GST.

Such a reconceptualization of social work action would make social work more compatible with the frame of reference used in many of the social sciences and with modern approaches in the philosophy of science. This compatibility would enable social work to utilize more fully the theoretical developments in other fields of social science. This is illustrated by the development of a new social work treatment theory by Virginia Satir which appears to be derived from her association with social scientists interested in communication theory. (4)

A major finding of the project was that social work action concepts could be classified at a given level of GST. No intrinsic traits of GST were responsible for the few cases in which some of the judges failed to classify at the lowest tier.

Within the categories of this tier, lack of reliability was thought to be due to a number of factors having to do with the system;

First, the categories lacked operational definition or clear-cut specifications for inclusion and exclusion.

Second, each category was conceived as having heavy interaction with other categories. Different aspects of action traditionally defined could be seen as fitting into more than one category, depending on the point of view or varying phases of the action.

Third, as indicated previously, GST relies primarily on terms characteristic of the various scientific disciplines while the action concepts as may readily be seen come from less rigorous systems or from everyday terms. One of the problems of science has been to develop a language more precise and reliable than the traditional means of communication.

In going through the research process, members of the group not infrequently expressed the need for a more sophisticated vocabulary and grammar in the social work literature.

While some improvement in reliability might come in training social workers in the consistent use of terms, or in the translation of them into more rigorous concepts, much more could be expected from the use of a more rigorous system to begin with. This means no less than abandonment in large part of traditional social work terminology in favor of another, perhaps derived from a general, multidisciplinary and scientific language.

Further research should be directed toward this problem of reconceptualizing the field of social work. Exploratory studies should be made to evaluate the validity of any such reconceptualization.

One approach would be to continue to develop the theoretical model based on GST towards a concretization of the abstract concepts. This could involve the development of action concepts directly from the GST model through a logico-deductive process. These concepts could then be tested.

Another approach would be to take the generic traditional social work action concepts developed in this study and to test them further. These concepts could be tested for centrality by a schedule administered to practicing social workers in the various traditional fields. This would also further test the generic nature of these concepts. The generic concepts could then be arranged systematically. This system might then be related to GST.

Another much more difficult approach would be to use actual social work activity rather than the social work actions described in the literature. Once these are isolated, these activities could be codified into a system which might be related to GST.

More likely it will require a large number of intensive studies, breaking down each category of GST into many interrelated units before a valid system is formulated. This has proved necessary in the less complicated fields of science.

This much can be said. Five projects and many thousand man-hours of intensive work have failed to confirm any of the numerous approaches to a relatively simple relationship between GST and social work action concepts.

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APPENDICES

APPENDIX A

OUTLINE OF THE THEORETICAL MODEL FOR THE APPLICATION OF THE GENERAL SYSTEMS THEORY TO SOCIAL WORK

- I. First Tier - General properties of systems.
 1. Systems exist on a conceptual level.
 2. They are part of a dynamic supra-system.
 3. The supra-systems are separated from the sub-systems by boundaries.
 4. They contain dynamic sub-systems.
 5. They function in accord with laws of nature, energy, time or mathematics.
- II. Second Tier - Properties of open organismic systems.
 1. They exist on a conceptual level.
 2. They are part of an environment.
 3. There is input into the system through the boundary from the environment.
 4. There is output from the system through the boundary to the environment.
 5. The input and the output move to a steady state.
 6. The sub-systems serve to regulate the movement to a steady state.
 7. The sub-systems serve to regulate the boundary.
 8. The sub-systems operate in accord with the concept of equifinality.

9. The sub-systems are characterized by entropy.
10. The sub-systems are characterized by negative entropy.
11. There is an internal feed back sub-system for system control.

III. Third Tier - Properties of humans as open organismic systems.

1. Humans are living entities which are in accord with laws of biological functioning.
2. Humans receive material, energy and information from the environment.
3. Humans discharge material, energy and information into the environment.
4. The energy may come from within or without the known systems.
5. Human behavior is purposive.
6. Humans move to a characteristic state.
7. Humans move to this characteristic state through a process of equifinality.
8. Humans interact with the supra-systems and the sub-systems to enable them to reach a steady state.
9. Humans tend to develop patterns of function.
10. Humans in the steady state resist change.
11. Humans are capable, within limits, of adjusting to internal and external change.

12. Humans regenerate damaged parts.

13. Humans reproduce their own kind.

IV. Fourth Tier - Properties of human groups as open organismic systems.

1. Humans are individuals with unique personality structures and orientations to their culture and environment around them. Human's systemic nature (see tier three) operates to bring them into groups.
2. When two or more persons interact, a sense of groupiness (group cohesiveness) develops which increases with the rate of interaction.
3. The group in developing groupiness also develops a group syntality which serves to separate the individuals and the other groups in the environment. This is relatively persistent through time.
4. Groups have a motivation system which provides energy for group functioning. It derives from the individual member needs and the group needs (Gestalt conception) to move to a steady state.
5. The group has a value orientation which is derived from the interaction of the members which serves to give group values and direction to the motivation.

6. The group has a status or positional system in its internal functioning.
7. The group has a status or positional system in relation to the environment.
8. The group has a role system for the group member.
9. The group has a role system in relation to the environment.
10. The group has a relationship system which prescribes the type of internal interaction.
11. The group has a relationship system which prescribes the type of interaction with the environment.
12. The group has a communication system which serves to coordinate the individual members (and their need) and the group (and its needs). It also develops a commonly understood symbolic or signification modality to enable this.
13. The group has a communication system which serves to coordinate the group (and its needs) with the environment (and its needs). It also develops a commonly understood symbolic signification modality to enable this.
14. Groups have a control system which serves to coordinate and/or direct the internal functioning of the group.

15. The group has a control system which serves to coordinate and/or direct the group in relation to the environment.
16. The group has a locomotion system which moves it through time and space (physical, social or conceptual).
17. The group has a locomotion system which moves its individual members through time and space (physical, social or conceptual).
18. The group has a maintenance system which serves to continue the existence of the group through preventive and remedial action.
19. The group has a maintenance system which serves to continue the existence (physically or conceptually) of the individual members of the group through preventive or remedial action.
20. The group has a "life cycle" in relation to the environment.
21. The sub-systems in the group have a "life cycle".

APPENDIX B

SOCIAL WORK LITERATURE FROM WHICH ACTION CONCEPTS WERE SELECTED

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APPENDIX C

ACTION CONCEPTS

Community Organization

1. Interprets client to others in terms of activities, purposes and proposals.
- *2. Interprets worker's function to group.
3. Interprets function of agency to group.
- *4. Gives interpretation of process toward goal.
5. Interprets purpose and structure (of intergroup).
- *6. Interprets blocks in progress toward goal.
7. Interprets constantly other group's functions.
8. Interprets interaction.
9. Spreads the consciousness of need.
10. Encourages awareness of latent problems.
11. Enables identification and examination of one's own interest in social goals and problems.
12. Recognizes when conditions are favorable to enlist cooperation for an advance on a particular front.
- *13. Focuses discontent of client.
- *14. Heightens awareness of social responsibilities.
- *15. Advises on problem solving methods.
16. Gives suggestions.
- *17. Serves as an expert to clients.
18. Enables participation in identifying social problems.
19. Enables group to discover, modify or discard social goals.
- *20. Helps carry out social goals.
21. Emphasizes common goals.
- *22. Enables participation in selecting social goals.
- *23. Initiates and facilitates process of identifying discontent.
24. Promotes consciousness of need.
- *25. Helps client verbalize discontent.
26. Helps the agency to strengthen its program of interpretation to the community.
27. Enlists the interest of key persons in the community.
28. Suggests the relationship between the work of the agency and the well-being of the community.
29. Arranges interviews with organizations to give them some information about the work of his agency.

30. Board and staff have responsibility in public relations.
31. In public relations - speaks to groups, contacts the press.
32. Gives content to the board meeting by enhancing the capacity of individual members to contribute effectively to the group's deliberations.
- *33. Develops relationships with the board and with the committees created to assist the board.
- *34. Records and analyzes social data.
35. Collects and publishes financial and service data pertaining to the work of its member agencies.
36. Encourages realistic appraisal of problems.
37. Focuses desires for action.
38. "Directs" social resources to meet welfare needs.
39. Indicates plans for the forthcoming year.
40. Compiles directories of social welfare services.
41. Annual report - advances the community organization objectives of the agency.
42. Coordinates existing treatment facilities.
- *43. Examines the service program of his (own) agency to make sure it is being competently administered.
44. Provides data that will enable the community to evaluate the work done.
- *45. Clarifies roles.
- *46. Strengthens awareness of roles.
- *47. Stimulates feelings of need in client for more adequate life.
48. Suggests alternatives to present conditions.
- *49. Encourages organization toward the solution of problems.
- *50. Helps select social goals.
51. Develops programs.
52. Investigates.
53. Makes a social study.
54. Engages in experimentation under controlled conditions.
55. Directs research and interprets findings to the community.
56. Conducts surveys to determine whether social service needs in the community are reasonably well met by the existing programs of the agencies.
- *57. Seeks to help the group to exercise the most effective quality of leadership it can develop.
58. Clarifies issues.
- *59. Gives support to clients.
60. Enables person to help his group identify and examine own interest in social goals or problems.
- *61. Acts as resource person.

- *62. Functions as an enabler.
- *63. Enables group to interact with other groups represented in terms of social goals.
- *64. Encourages discussion.
- *65. Acts as communication link.
- 66. Assembles data in order to help people to ascertain what a particular community needs and how its needs may be met.
- 67. Studies the local situation to determine whether a need exists which might be met through the development of a program.
- 68. Seeks to develop new methods and new interests out of the elements of knowledge with which the group is already familiar.
- 69. Cultivates favorable sentiment for a new program before the program is imposed upon the community.
- 70. Develops public support of, and public participation in, social welfare activities.
- *71. Establishes professional relationship.
- *72. Helps people see commonality of feelings.
- *73. Gives factual information to group.
- 74. Gives support to efforts to deal with problems.
- *75. Adjusts material to audience - begins where they are in their thinking.
- 76. Enables client to develop group bond of strength sufficient only to maintain operations adequately.
- 77. Encourages individuals and groups to pool their resources and efforts to achieve an improvement in group life.
- 78. Helps group develop suitable structure and operating practices.
- *79. Helps person understand group or groups.
- 80. Draws persons of diverse talents and interest into an organic relationship with the total program.
- 81. Develops skills in stimulating group thinking and in motivating group action.
- 82. Establishes channels through which groups may communicate and react upon one another.
- *83. Helps people relate themselves to the group quest for social integration.
- 84. Promotes the cooperation of groups.
- *85. Provides means by which individuals may identify with groups in the interest of enhancing the effectiveness of their personal contribution.
- 86. Enables group to form, function and disband.
- 87. Discusses and interprets role of intergroup to group.
- *88. Helps groups respond to the significant changes in community life.

- 89. Understands individuals, groups represented and relations between the individuals.
- *90. Nourishes interpersonal relationships.
- 91. Helps individual to gain or lose status in inter-groups.
- *92. Helps individual to present and represent his group adequately.
- *93. Helps client to overcome resistance.
- *94. Helps people look at themselves.
- 95. Helps client to release feelings.
- 96. Is a guide to help client establish and find means of achieving own goals.
- *97. Involves client in working on problem.
- *98. Helps individual to understand nature of the process in which engaged.
- 99. Helps individual to perform role as representative.
- *100. Helps individual to understand other member and groups they represent.
- 101. Helps individuals to face personal problems if they block intergroup process.
- 102. Shows acceptance of individuals and ideas.
- *103. Establishes rapport with client.
- 104. Helps person to examine viewpoints of others and to act and react responsibly.
- *105. Enables individual to establish and maintain responsible relation with groups he is representing.
- *106. Helps client to grow in personal and social understanding.
- 107. Enables client to clarify ideas and express own goals.
- 108. Analyzes problems currently confronting the agency and the community.
- *109. Evaluates.
- *110. Uses self-knowledge ably and professionally.
- *111. Analyzes.
- 112. Compromises on basis of tentative progress.
- 113. Asks questions to stimulate insight.
- *114. Enables individual to understand, accept and perform role consistent with role as representative.
- 115. Administers.
- 116. Promotes voluntary agreement through negotiation.
- 117. Operates joint services.
- 118. Recruits and trains new personnel.
- 119. Promotes legislation.
- 120. Proposes specific social programs to legislators.
- 121. Promotes social action.
- 122. Advances a cause through personal contacts with officials, political leaders and other persons and groups.

- *123. Develops and uses group discussion, the conference process, and committees.
- 124. Promotes interagency consultation.
- 125. Plans.
- *126. Controls recording on a community-wide basis.
- 127. Records case material.
- 128. Further develops mutually satisfactory relations between groups represented (in terms of selected social goals).
- 129. Enables communication "from and to" intergroup.
- *130. Enables selection of suitable representatives to the intergroup.
- 131. Shares in responsibility of intergroup to develop functions, structure and operating practice.
- 132. Interviews.
- 133. Confronts.
- *134. Gives evaluation of goal-directed process.
- 135. Helps client evaluate accomplishment.
- 136. Accounts for funds spent.
- 137. Raises funds.
- 138. Carries out financial campaigns.
- 139. Budgets.

Group Work

- *140. Helps establish a meaningful relationship between the group and the community.
- 141. Experiences a relationship with the worker.
- *142. Establishes positive professional relationship.
- 143. Experiences a relationship with the group.
- 144. Relates group to member.
- 145. Relates group to worker.
- *146. Introduces and sustains a process of dealing with the problems of social relationships.
- 147. Relates members to group.
- 148. Forms positive relations with the group.
- *149. Maintains relationships.
- *150. Establishes purposeful relationships.
- 151. Forms positive relationships with group members.
- 152. Stimulates development.
- *153. Promotes creativity and industry.
- *154. Promotes expression.
- 155. Promotes healthy peer group relationships.
- *156. Promotes verbal skills.
- 157. Promotes spontaneity.
- *158. Promotes decision making.
- *159. Promotes self-awareness.

- *160. Promotes inner control.
- 161. Promotes insight.
- 162. Diagnoses individual problems.
- 163. Diagnoses individual needs.
- 164. Studies objectively.
- *165. Records process.
- *166. Keeps records.
- 167. Is able to record the developmental process of the group.
- 168. Uses the recordings to help group to review and understand its experiences as a means of improvement.
- 169. Supports feelings of belonging in group. Helps individuals assume leadership functions (positive).
- 170. Recognizes and supports individuals.
- *171. Supports individual strengths and talents.
- *172. Supports ventilation.
- *173. Supports empathy.
- *174. Supports understanding.
- 175. Supports security.
- *176. Supports involvement in activity and decision making, assumes responsibility.
- 177. Supports gain of insight.
- *178. Accepts self and others.
- *179. Supports increasing discrimination in social response.
- *180. Supports expression of themselves.
- *181. Supports feeling of accomplishment.
- 182. Enables group to work out objectives.
- *183. Enables expression of fears and anxieties.
- *184. Enables security.
- *185. Enables acceptance of self.
- *186. Enables understanding.
- 187. Enables one to gain insight.
- 188. Enables feeling of accomplishment.
- 189. Enables expression of themselves.
- 190. Helps develop programs which will be means to gain the group needs.
- *191. Helps effect change of destructive leadership.
- 192. Helps act out aggression.
- *193. Helps ventilate aggression.
- 194. Helps groups understand rules of the agency.
- 195. Helps group accept rules of the agency.
- 196. Helps group analyze situation as part of the working-through of group on intergroup conflict.
- *197. Uses agency and community resources.
- 198. Helps individuals outside the group with individual interviews.

- 199. Helps group ventilate hostile feelings.
- 200. Helps group accept changes in the group from within.
- 201. Helps group understand changes in the group from without.
- 202. Helps client accept others.
- *203. Recognizes and supports individual goals and needs.
- 204. Uses activity programs appropriately.
- 205. Supervises auxiliary staff.
- 206. Supervises volunteers and untrained personnel.
- *207. Helps individuals find resources outside the group by referral.
- *208. Uses outside resources.
- *209. Helps individual members make use of specialized service not available in the group.
- *210. Encourages positive means of self-expression.
- *211. Alleviates conflict.
- *212. Alleviates tension.
- 213. Alleviates fear.
- *214. Alleviates anxiety.
- 215. Alleviates guilt.
- *216. Deals with conflict.
- *217. Solves conflicts - discussion method. Interprets behavior leading to conflict, promotes free expression of ideas.
- 218. Helps group develop a set of limits of behavior.
- *219. Institutes controls.
- 220. Helps group take responsibility for their own activities.
- *221. Enables involvement in activity, decision making. Assumes responsibility.
- 222. Makes referrals to community resources.
- 223. Locates and informs the group of outside resources which can be used for program purposes.
- *224. Accepts and interprets anger and hostility.
- 225. Accepts behavior.
- *226. Accepts non-judgmentally.
- *227. Encourages group participation.
- 228. Encourages catharsis.
- *229. Encourages awareness of consequences.
- *230. Encourages participation in decision making.
- *231. Accepts ideas.
- *232. Accepts feelings.
- 233. Accepts the person.
- 234. Promotes acceptance from group.
- *235. Diagnoses individuals role in group - as acceptance or rejection by group.

- 236. Establishes a goal acceptable to the client.
- *237. Protects weaker members.
- 238. Works with group feelings.
- *239. Handles rejection.
- 240. Leads.
- 241. Guides.
- *242. Stimulates interest.
- 243. Establishes goals for the group.
- 244. Organizes.
- *245. Discusses.
- 246. Programs.
- *247. Demonstrates.
- 248. Instructs.
- *249. Improves.
- *250. Accepts.
- *251. Recognizes group needs.
- *252. Establishes goals for individuals.
- *253. Clarifies.
- *254. Clarifies immediate goals.
- 255. Effects changes in group processes.
- 256. Discerns group change.
- *257. Discerns group movement.
- 258. Interprets function of worker to group.
- 259. Supports constructive leadership.
- 260. Individualizes group members.
- *261. Anticipates group movement.
- *262. Works with group as a whole.
- 263. Judges developmental level of the group.
- *264. Work directly with formed selected groups on some specific problem of the group.
- 265. Analyzes the group situation.
- 266. Evaluates progress.
- 267. Guides group thinking so that interest and needs will be revealed and understood.
- 268. Follows the lead of the group.
- *269. Programs activities.
- 270. Effects changes in intergroup relations.
- 271. Effects changes in group structure.
- *272. Observes individuals.
- *273. Directs observation skills.
- 274. Listens to group.
- 275. Observes group.
- 276. Establishes mutual trust "relationship".
- *277. Recognizes insight.
- 278. Recognizes individual group members.
- *279. Recognizes limitations of the group.
- 280. Clarifies and corrects prejudices and misconceptions.

- 281. Serves as a line of communication between one group and another.
- *282. Recognizes potentials of the group.
- 283. Has knowledge of sub-groups.
- 284. Participates in group interaction.
- 285. Integrates and applies theory to practice.
- 286. Helps individuals assume group roles contributing to the groups development.
- 287. Helps individual assume group role contributing to his own development.
- 288. Detects non-verbal interaction.
- *289. Detects verbal interaction.
- *290. Handles inter-personal hostilities.
- 291. Identifies pathology.
- *292. Listens to individuals.
- *293. Appraises own performance.
- 294. Allows voluntary participation.
- 295. Controls own feeling about group.
- *296. Handles own feelings.
- *297. Handles own needs.
- *298. Handles own dependency.
- *299. Uses self in a planned and flexible way.
- *300. Handles own anxiety.
- *301. Structures rules of interaction.
- *302. Develops a sense of self-criticism and re-evaluation on the part of the group.
- 303. Develops group norms of behavior of the individual and the group.
- *304. Develops group self-discipline.
- 305. Develops a sense of responsibility in the group for maintenance of the group.
- *306. Develops social activities and adjustments.
- *307. Implements release of feelings positive and negative.
- *308. Is skillful in determining, interpreting, assuming and modifying own role.
- 309. Establishes limits.
- 310. Loves (or "gives to") the members.
- *311. Teaches social survival.
- *312. Teaches social skills.
- 313. Structures group for newcomer.
- 314. Develops program.
- 315. Desensitizes.
- *316. Structures problems.
- *317. Prepares summation.
- *318. Focuses.
- *319. Confronts.

- *320. Gives information.
- *321. Plays role.
- *322. Reinforces.
- 323. Qualifies confidentiality.
- *324. Shifts roles.
- *325. Orients to group process.
- *326. Identifies.
- *327. **

Casework

- 328. Keeps interview material confidential.
- *329. Guides his treatment by age of client.
- *330. Listens uncritically.
- 331. Induces client self-awareness.
- *332. Appraises client's strengths.
- 333. "Focuses" treatment aims.
- 334. Counsels with the client's "significant others".
- *335. Brings preconscious thoughts to the conscious.
- *336. Requires client's consent for treatment.
- *337. Analyzes individual client situations.
- *338. Explains unavoidable delays.
- 339. Prepares client for termination of treatment.
- *340. Conserves psychological energies of client.
- 341. Conserves client's strengths.
- *342. Helps client identify reality.
- *343. Uses his authority.
- 344. Terminates treatment.
- *345. Explains agency policy.
- *346. Does not make impossible promises.
- *347. Cautiously uncovers unconscious repressed material.
- 348. Does not deal with client's unconscious.
- 349. Shares his thoughts with the client.
- 350. Manipulates the client's environment.
- *351. Collaborates with caseworkers.
- 352. Restores a client's functioning.
- *353. Sizes-up his client.
- 354. Helps the client to maintain his psychological balance.
- *355. **
- 356. Helps the client to gain satisfactions.
- 357. Gets permission from client for collaboration.
- 358. Facilitates a client's social adaptation.
- 359. Understands inter-family problems.
- *360. Arranges appointments.

- 361. Accepts client, goes further than recognition of right of self-determination, adds to this the quality of warmth and liking.
- 362. Involves much more whole self.
- *363. Suggests.
- *364. Writes letters.
- *365. Modifies children's feelings.
- 366. Shows good judgment.
- 367. Discourages.
- *368. Talks.
- *369. Gives reasons for talking, action or inaction.
- 370. Comments supportively.
- 371. Accompanies.
- *372. Times interpretive comments.
- 373. Treats specific client defenses.
- *374. Permits release of client's aggression.
- 375. Estimates kind and extent of treatment.
- *376. Listens attentively.
- 377. Induces client attitudes.
- *378. Asks questions.
- *379. Arouses a limited amount of client tension.
- 380. Reassures client at appropriate times.
- *381. Aids client to assume self-direction.
- *382. Understands the client in terms of the latter's life experiences.
- 383. Does not minimize fears.
- 384. Interviews.
- *385. Uses relationship.
- *386. Modifies parental attitudes.
- 387. Uses controlled transference relationship.
- 388. Recognizes emotional impact between himself and client.
- 389. Reinforces a client's functioning as a social being.
- 390. Reshapes a client's functioning as a social being.
- 391. Recognizes initial resistance.
- *392. Respects client's subjective version of his problem.
- 393. Gets his client to mobilize his energy and resources.
- 394. Helps his client to perceive his problem.
- 395. Helps a client to attack his problem systematically and logically one step at a time.
- 396. Discusses various courses of action with his client.
- 397. Calls client's attention to patterns of behavior.
- 398. Helps the client's behavior have meaning.
- *399. **

- 400. Relieves a client's crippling emotions or feelings.
- 401. Provides certain knowledge to his client.
- *402. Helps client clarify his feelings.
- *403. Works within an agency setting.
- *404. Reduces client's tensions.
- 405. Helps a client to dissolve frustration.
- *406. Releases client's capacities for constructive behavior.
- *407. Helps his client to choose and experiment with more appropriate modes of behavior.
- 408. Helps his client to adapt to life situations.
- 409. Measures his client.
- 410. Notices the client's behavior.
- 411. Helps a client to avoid frustration.
- *412. Relates psychological treatment to realities of living.
- *413. Interprets for his client certain things necessary for his progress.
- 414. Obtains facts about the client's problem.
- *415. Makes records of his activities.
- *416. Gets a person to talk about his problem.
- 417. Supports the client.
- 418. Observes client's behavior.
- *419. Motivates the client.
- *420. Uses community resources.
- 421. Diagnoses the client's problem.
- 422. Answers questions.
- 423. Works from the current situation.
- 424. Evaluates positive and negative feelings.
- 425. Controls time and space of interviews.
- 426. Eases guilt.
- *427. Uses his skill.

*Cards the traditional sort could not classify into the traditional methods.

**Cards lost.

CHAPTER IV

FINDINGS

The project has attempted to prove whether GST could be classified with traditional action concepts in a relatively simple and meaningful way. From the traditional literature a number of action concepts were extracted. These concepts were then classified, utilizing a sort method which was explained in detail in Chapter Three. It was the assumption that if these concepts could be reliably classified into the GST framework, a questionnaire could be devised to test GST in practice.

In order to determine if there was a significant difference between the independent sort and the group sort, a null hypothesis was formulated. This hypothesis stated: "There is no significant difference between the independent sort and the group sort in the distribution of the action concepts among the GST categories."

To test this hypothesis a Chi square was employed utilizing a two-sample test. This test is applicable where the researcher is interested in the number of subjects, objects or responses which fall in various categories. The researchers wished to test the hypothesis that these responses did not differ in frequency; that

APPENDIX D

CONTINGENCY TABLE: CASEWORK CONCEPTS

	Fe Group	Fe Ind.	Sum Fe	Fe Group	X ²	Fe Ind.	X ²
1	7	62	69	6.08	.14	62.93	.01
2	2	33	35	3.08	.38	31.92	.04
3	1	55	56	4.93	3.13	51.07	.30
4	6	63	69	6.08	.00	62.93	.00
5	6	88	94	8.28	.63	85.72	.06
6	1	28	29	2.55	.94	26.45	.10
7	0	11	11	.97	.97	10.03	.10
8	9	27	36	3.17	10.12	32.83	1.04
9	2	6	8	.70	2.41	7.30	.23
10	1	113	114	10.04	8.14	103.96	.79
11	6	32	38	3.35	2.10	34.65	.20
12	15	171	186	16.35	.12	169.62	.01
13	5	24	29	2.55	2.35	26.45	.23
14	4	54	58	5.11	.24	52.59	.02
15	2	24	26	2.29	.04	23.71	.00
16	10	41	51	4.49	6.76	46.51	.65
17	8	53	61	5.37	1.29	55.63	.12
18	0	29	29	2.55	2.55	26.45	.25
19	11	68	79	6.96	2.35	72.04	.23
20	1	12	13	1.15	.02	11.86	.00
21	1	21	22	1.94	.46	20.06	.04
	98	1015	1113		43.14		4.42

Significant Level 5% = 31.41
1% = 37.57

Chi square 49.56
DF = 20

CONTINGENCY TABLE: COMMUNITY ORGANIZATION CONCEPTS

	Fe Group	Fe Ind.	Sum Fe	Fe Group	χ^2	Fe Ind.	χ^2
1	2	31	33	2.98	.32	30.02	.03
2	0	39	39	3.52	3.52	35.48	.35
3	3	41	44	3.98	.24	40.02	.02
4	5	62	67	6.06	.19	60.95	.02
5	9	123	132	11.93	.72	120.07	.07
6	3	31	34	3.07	.00	30.93	.00
7	1	12	13	1.18	.03	11.83	.00
8	9	65	74	6.69	.80	67.31	.08
9	3	25	28	2.53	.09	25.47	.01
10	6	88	94	8.50	.74	85.51	.07
11	8	90	98	8.87	.09	89.14	.01
12	18	170	188	16.99	.06	171.01	.01
13	18	180	198	17.89	.00	180.11	.00
14	4	68	72	6.51	.97	65.49	.10
15	3	48	51	4.61	.56	46.39	.06
16	11	101	112	10.12	.08	101.88	.01
17	7	42	49	4.43	1.49	44.57	.15
18	15	73	88	7.95	6.25	80.05	.62
19	10	62	72	6.31	1.87	65.49	.19
20	1	20	21	1.90	.43	19.10	.07
21	1	8	9	.81	.04	8.19	.00
	137	1379	1516		18.49		1.87

Significant Level 5% = 31.41
1% = 37.57

Chi square 20.36
DF = 20

CONTINGENCY TABLE: GROUP WORK CONCEPTS

	Fo Group	Fo Ind.	Sum Fo	Fe Group	X ²	Fe Ind.	X ²
1	12	93	105	10.01	.40	95.00	.04
2	2	73	75	7.15	3.71	67.85	.39
3	2	73	75	7.15	3.71	67.85	.39
4	4	74	78	7.43	1.58	70.57	.17
5	21	140	161	15.34	2.09	145.66	.22
6	6	35	41	3.91	1.12	37.10	.12
7	1	9	10	.95	.26	9.05	.01
8	19	97	116	11.06	5.70	104.94	.60
9	1	22	23	2.19	.65	20.81	.07
10	13	249	262	24.97	5.74	237.03	.60
11	11	72	83	7.91	1.21	75.09	.13
12	24	244	268	25.55	.10	242.46	.01
13	15	43	58	5.53	16.22	52.47	1.17
14	10	137	147	15.01	1.15	132.99	.12
15	3	51	54	5.15	.90	48.85	.09
16	10	122	132	12.58	.53	119.42	.06
17	7	66	73	6.96	.01	66.04	.00
18	14	82	96	9.15	2.57	86.85	.27
19	14	92	106	10.10	1.51	95.90	.16
20	2	27	29	2.76	.21	26.24	.02
21	0	12	12	1.14	1.14	10.86	.12
	<u>191</u>	<u>1813</u>	<u>2004</u>		<u>50.51</u>		<u>4.76</u>

Significant Level 5% = 31.41
1% = 37.57

Chi square 55.27
DF = 20

CONTINGENCY TABLE: TOTAL SORT

	Fe Group	Fe Ind.	Sum Fe	Fe Group	χ^2	Fe Ind.	χ^2
1	21	186	207	19.03	.20	187.97	.02
2	4	145	149	13.70	6.87	135.30	.70
3	6	169	175	16.09	6.33	158.91	.64
4	15	199	214	19.68	1.11	194.32	.11
5	36	351	387	35.58	.01	351.42	.00
6	10	94	104	9.56	.02	94.44	.00
7	2	32	34	3.13	.41	30.87	.04
8	37	189	226	20.78	12.66	205.22	1.28
9	6	53	59	5.42	.06	53.58	.01
10	20	450	470	43.22	12.48	426.78	1.26
11	25	194	219	20.14	1.17	198.86	.12
12	57	585	642	59.03	.07	582.97	.01
13	38	247	285	26.21	5.30	258.79	.54
14	18	259	277	25.47	2.19	251.53	.22
15	8	123	131	12.05	1.36	118.96	.14
16	31	264	295	27.13	.55	267.88	.06
17	22	161	183	16.83	1.59	166.17	.16
18	29	184	213	19.59	4.52	193.42	.46
19	35	222	257	23.63	5.47	233.37	.55
20	4	59	63	5.79	.55	57.21	.06
21	2	41	43	3.95	.96	39.05	.10
	426	4207	4633		63.88		6.48

Significant Level 5% = 31.41
1% = 37.57

Chi square 70.36
DF = 20